IN THE SPECIFICATION:

Please amend the specification as follows:

[0007]

Japanese Patent Application Laid-Open No. 62-169041 has described a device in which a plurality of cavity resonators are arranged to measure moisture content; however, the cavity resonator used in this case is a re-entrant type cavity resonator. The re-entrant type cavity resonator does not regulate the electric field distribution, and its electric field vector is not made in parallel with the sheet face of a sheet-shaped specimen. For this reason, the volume of the specimen that interacts with the electric ~~filed~~ field is small, failing to provide sufficient measuring accuracy.

[0011]

Moreover, the measuring device of the present invention includes: a microwave cavity resonator that is provided with ~~two-holed~~ two single-holed iris plates which are arranged vertically in the direction of a tube axis at mid points of a wave guide so that a resonator portion is formed between the iris plates and a traveling wave portion is formed outside of each of the iris plates, and with a slit in which a specimen is disposed being placed in a manner so as to cross the resonator portion; a microwave sweep oscillator which is connected to one of the pair of traveling wave portions and oscillates at a frequency in a predetermined range between 1 to 25 GHz; a microwave intensity receiver

that is connected to the other of the pair of traveling wave portions; and a data processing device which, upon receipt of a signal from the microwave intensity receiver, detects a peak level, and determines the moisture content or the moisture percentage of a specimen based upon the difference in measured resonance peak level between cases when the specimen is not present in the slit and the specimen is present in the slit.

[0012]

A microwave cavity resonator to be used in the present invention is shown in Fig. 2 or Fig. 3. The microwave cavity resonator shown in Fig. 2 has a wave guide 2A that is constituted by wave guide portions 4a, 4b, 6a and 6b. ~~Two holed~~ Two single-holed iris plates 8a and 8b are arranged vertically in the direction of a tube axis at mid points of a wave guide 2A. Resonator portions 4a and 4b are formed between the iris plates 8a and 8b, with the outside portions of the iris plates 8a and 8b respectively forming traveling wave portions 6a and 6b. The microwave cavity resonator has a slit 12 in which a specimen 10 is disposed being placed in a manner so as to cross the resonator portions 4a and 4b. A microwave sweep oscillator that oscillates at a frequency in a predetermined range between 1 to 25 GHz is connected to one of the traveling wave portions 6a, and a microwave intensity receiver is connected to the other traveling wave portion 6b. Reference numerals 14a and 14b respectively indicate antennas attached to the respective traveling wave portions 6a and 6b, and the antenna 14a is connected to the microwave sweep oscillator, while the antenna 14b is connected to the microwave intensity receiver.

[0038]

Fig. 1 shows a schematic structure of a moisture content measuring device in accordance with one embodiment; Fig. 6 shows a schematic block diagram that indicates flows of signals; and Fig. 7 is a time chart.

A specimen 10 is allowed to travel in contact with or in the vicinity of a microwave cavity resonator 1 so that a resonance peak level is measured in real time. This microwave cavity resonator 1 has a structure shown in Fig. 2 or Fig. 3, and as schematically shown in Fig. 1, ~~two-holed~~ two single-holed iris plates 8a and 8b are arranged vertically on a tube axis at the mid point of a wave guide. Each of these iris plates 8a and 8b has one hole positioned on the tube axis of the wave guide. Resonator portions 4a and 4b are formed between the iris plates 8a and 8b, and a slit 12 in which a specimen 10 is placed is formed in a manner so as to cross the resonator portions 4a and 4b. The outside portions 6a and 6b (in the case of Fig. 3, 16a and 16b are included) of the iris plates 8a and 8b form traveling wave portions. An exciter antenna 14a is attached to one of the traveling wave portions 6a, and a microwave sweep oscillator 20 that oscillates at a frequency in a predetermined range between 1 to 25GHz is connected to the antenna 14a. An antenna 14b is attached to the other traveling wave portion 6b, and a microwave intensity receiver constituted by a detector 22, an amplifier and A/D (analog/digital) converter 24 is connected to the antenna 14b.